

## Implementing a DTO in the Manufacturing Industry - Virtual Workshop

*A team workshop focused on strategies to enhance resource planning, process improvement, operational costing, and product profitability*

Gartner® defines a Digital Twin of an Organization (DTO) as:

*a dynamic software model of any organization that relies on operational and contextual data to understand how an organization operationalizes its business model, connects with its current state, responds to changes, deploys resources, and delivers customer value.*

This four x ½ day virtual workshop, developed with funding support from NGen (the organization leading Canada’s Global Innovation Cluster for Advanced Manufacturing), helps manufacturers define the critical success factors for designing, implementing, and utilizing a DTO. Using real-world manufacturing examples and an interactive manufacturing case study, participants learn “ready to apply” tips and techniques to model and optimize production processes, supporting operations, product costing, and overall profitability.

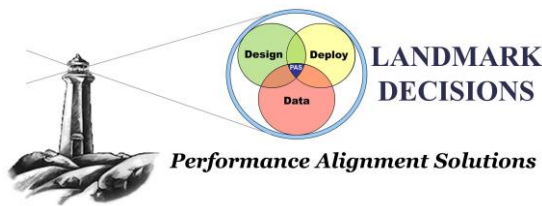
### **Key Learning Objectives**

- Learn how to initiate, align, and sustain manufacturing process analysis and modeling to optimize asset and/or labour capacities and utilizations, improve operational planning, and enrich costing and operational budgeting in a manufacturing setting
- Understand the role of DTO modeling technology using an illustrative Canadian DTO software, Collaborative Business Planning (CBP), for process and cost flow visualization and “what-if” scenario-planning analysis
- Appreciate the value of analyzing current state and simulating future state manufacturing operations in a collaborative environment to improve profitability and long-term business viability

### **Who Should Attend and Why?**

This workshop provides foundational training for leveraging operational and financial data to develop highly-visual interactive DTO models for any manufacturer. Attending as a team helps realize the true value of using a DTO in a collaborative environment. Although any functional role will benefit, positions typically related to DTO implementations include:

- **Production managers** focused on resource capacity requirements while decreasing lead times, increasing throughputs, and realizing cost reduction targets
- **Continuous Improvement (CI) managers** responsible for executing process improvement initiatives and establishing/maintaining an organizational CI culture
- **Maintenance and Supply Chain managers** responsible for aligning and optimizing the supporting processes for streamlining manufacturing
- **Financial managers** responsible for resource planning, operational and financial budgeting, and/or costing and profitability analysis
- **Strategic managers/planners** dealing with the impact of future customer needs, supply chain disruptions, sustainability initiatives, investment decisions, and other business changes



## **Course Outline**

### **Key DTO Benefits for Improved Manufacturing Processes**

- Recognizing current challenges in conventional manufacturing process analysis and operational costing and budgeting
- Leveraging and linking familiar manufacturing improvement techniques like Lean Value Stream Mapping (VSM) and Activity-Based Planning (ABP)
- Understanding the impact of downtime, setups and change-overs on available resource capacity, utilizations, and product cost and profitability
- Mapping the role of production management, maintenance, supply chain and SG&A operations to product costing and profitability
- Recognizing how DTO modeling technology standardizes data, understanding, and manufacturing staff engagement
- Utilizing DTO models for scenario-planning to “pre-test” initiatives related to operational efficiency, cost reduction initiatives and/or strategic proposals

### **An Eight Step Implementation Methodology for Designing a Manufacturing DTO**

1. Conduct a strategic assessment to prioritize areas for operational improvement
2. Analyze production and supporting resources including financial linkages
3. Perform a process analysis to map value streams and activity-based operational flows
4. Design integrated DTO model diagrams to define specific data collection requirements
5. Collect relevant operational and financial data to populate the DTO model
6. Build and validate the DTO model using representative DTO software
7. Enhance process/cost understanding to discover business optimization opportunities
8. Optimize and plan for the future using “what-if” DTO scenario-planning capabilities

### **The Role and Value of DTO Technology**

- How technology enhances organizational engagement
- The value proposition for implementing DTO technology
- Applying process optimization concepts using a representative DTO software

### **Initiating, Aligning and Sustaining DTO Models**

- Identifying major hurdles to successfully initiating and sustaining DTO models
- Considerations and benefits for deploying a DTO pilot project
- Use case examples of manufacturers who have implemented/benefited from a DTO

**Case Study:** This workshop utilizes a manufacturing case study and “hands-on” group exercises to walk participants through each of the eight implementation steps for creating a DTO.

**For more information or registration:** <https://landmark.ca/resources-training>